
SYSTEMS ACQUISITION AND INTERNATIONAL ARMAMENTS COOPERATION

INTRODUCTION

This chapter introduces another term in the lexicon of international defense interactions—International Armaments Cooperation (IAC). As discussed earlier in this text, the term security assistance (SA) refers primarily to a group of six programs:

- Foreign Military Sales (FMS)
- Foreign Military Financing Program (FMFP)
- International Military Education and Training (IMET)
- Direct Commercial Sales (DCS)
- Economic Support Fund (ESF)
- Peacekeeping Operations (PKO)

SA itself may be viewed as a portion of a broader area of Department of Defense (DOD) international interaction referred to as security cooperation (SC). IAC is not a SA program but is a parallel area of international defense engagement under the SC umbrella. While the FMS program predominately involves the sale of various defense systems, the DOD has already developed and deployed to its own forces, IAC predominantly focuses on interfacing with international partners during the research, development, testing and evaluation (RDT&E) phases of the US systems acquisition process.

Like SA, IAC seeks to enhance US national security but does so through different methods. It is important that SA personnel have some familiarity with IAC because IAC activities often are concurrently underway with foreign customers in addition to SA activities. From the foreign purchaser's perspective, both areas involve a defense relationship with the US and the foreign customer may not recognize the different management structure the US applies to IAC programs versus the management structure for SA.

The purpose of this chapter is to introduce IAC to the SA professional in order to promote awareness and to enable individuals to be somewhat conversant in IAC fundamentals in the event that an international customer raises IAC related issues within the SA arena. Due to IAC's intertwined relationship to the US systems acquisition process, this chapter will first briefly discuss the system acquisition process and foreign partner's potential involvement. Several key documents developed during the system acquisition process will be described due to their role in international program security. The balance of this chapter will summarize the different types of IAC programs and the key IAC organizations within the DOD.

UNITED STATES SYSTEMS ACQUISITION PROCESS

Before considering how DOD conducts IAC, one must briefly review the way DOD creates military systems for itself. An additional reason to look at DOD's system development process is to recognize that factors relating to potential future foreign sales of the system are considered concurrent with system development. The DOD does not wait until a FMS letter of request (LOR) is submitted to begin evaluating the various technology transfer and releasability issues. DOD's system acquisition policy requires these issues to be examined concurrent with new system development.

Capability Requirements Determination

Prior to entering the systems acquisition process, DOD must determine what capabilities it requires to accomplish national security goals in the future. The DOD's process for evaluating and determining its future capability requirements is called the Joint Capabilities Integration and Development System (JCIDS). JCIDS plays a key role in identifying the capabilities required to support the National Defense Strategy, the National Military Strategy, and the National Strategy for Homeland Defense. The JCIDS process supports the acquisition process by identifying and assessing capability needs and associated performance criteria to be used as a basis for acquiring the right capabilities as represented by various defense systems. The JCIDS policy and process is described in CJCSI 3170.01G, *Joint Capabilities Integration and Development System*.

System Acquisition Policy

The DOD has a standard management framework to develop, produce, and sustain weapon systems. The key system acquisition policy documents are:

- DOD Directive 5000.01, *The Defense Acquisition System*
- DOD Instruction 5000.02, *Operation of the Defense Acquisition System*

Both of these policy documents are publicly accessible. All military departments (MILDEPs) are required to use the processes specified in these documents to develop new weapon systems. If, under FMS, the DOD approves developing a unique system or a major modification to an existing system for an FMS customer, these same system acquisition policies and processes would apply to the FMS system development or modification work.

Defense Acquisition Oversight Structure

If an FMS unique development or major system acquisition project is undertaken, the FMS customer and the SC workforce should be familiar with the acquisition oversight structure that will be applied. The acquisition oversight structure depends primarily on the scope and costs of the program. Each acquisition program will be designated into an acquisition category (ACAT). The ACAT specifies the level for program review and decision that must be accomplished for the program to progress through the various acquisition milestones and decision points. The ACAT categories are described in DOD Instruction 5000.02.

The most complex and expensive acquisition programs must be reviewed and have decisions rendered by the Defense Acquisition Executive (DAE). The DAE is the Under Secretary of Defense for Acquisition, Technology and Logistics [USD (AT&L)]. The next tier of programs is reviewed by the Component Acquisition Executive (CAE), which is the senior acquisition individual within each military service. Next, in the acquisition management structure, are the Program Executive Officers (PEOs). PEOs are individuals that typically have responsibility for overseeing several acquisition programs and report to the CAE. An acquisition program manager is responsible for managing all aspects of an individual acquisition program and for guiding the program towards meeting all cost,

schedule and system performance goals. Individual program managers report up through the acquisition management structure applicable to the program's ACAT. This may include reporting to the PEO, CAE and DAE.

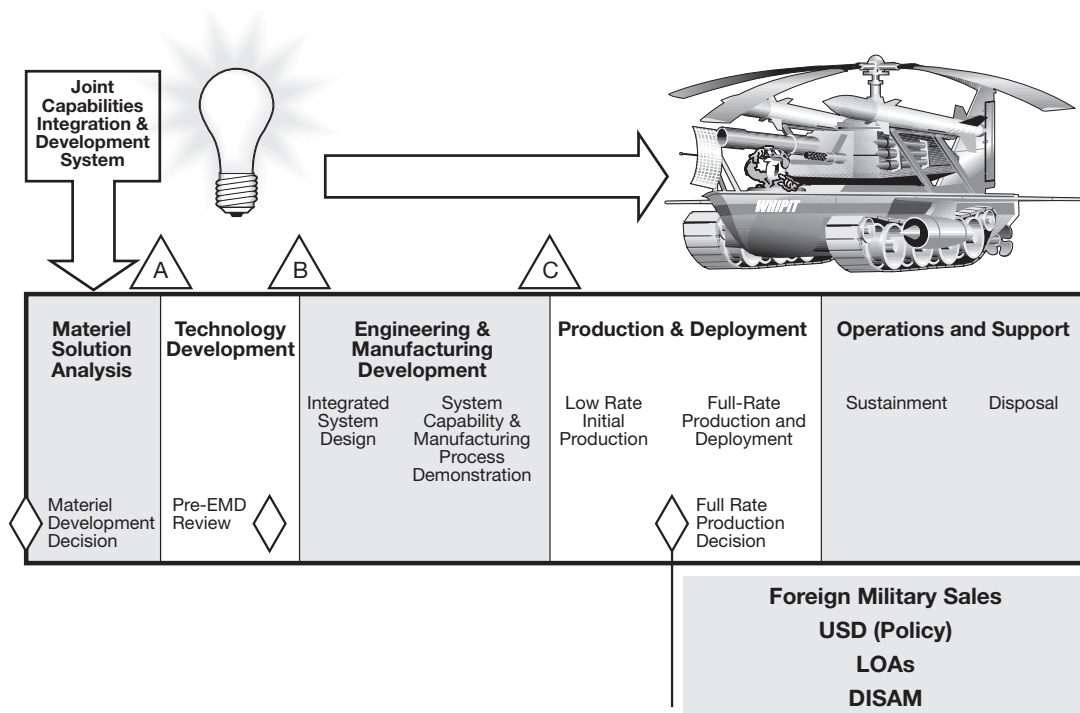
Defense Acquisition Management Framework

The DOD defense acquisition management framework is depicted in figure 13-1. This life cycle process consists of five phases:

- Materiel solution analysis
- Technology development
- Engineering and manufacturing development
- Production and deployment
- Operations and support

A Materiel Development Decision begins the system acquisition process. A Materiel Development Decision results when the JCIDS requirement analysis concludes that changes to existing doctrine, organization, training, leadership, personnel or facilities will be unable to produce the validated capability requirement. Consequently, a new materiel solution is required. The defense acquisition system is the process used by the DOD to create materiel solutions. The defense acquisition system's lifecycle processes will include a series of progressive activities. In order to progress through this series of activities, certain event driven reviews are required to be successfully accomplished in order to proceed. Some of the key activities to be accomplished include analyzing various alternatives for achieving the desired capability, creating or identifying underlying technologies, engineering the applicable technologies into a system design, testing the designs to validate utility, developing the capacity to produce the selected design, and fielding the support infrastructure to sustain the system over its expected life.

Figure 13-1
Defense Acquisition System Life Cycle



FMS programs are typically generated during the last two phases of the system acquisition life cycle. In fact, DOD policy states that the USG will only agree to sell systems through FMS that have been approved for full rate production for US forces. Therefore, the key acquisition decision point, from an FMS perspective, is the full rate production review. If a foreign customer requests a letter of offer and acceptance (LOA) for a system that has not yet been approved for full rate production, a policy waiver is required. In this situation, Defense Security Cooperation Agency (DSCA) will coordinate with USD (AT&L) before offering an LOA for the system.

The reason for this policy concerns future supportability and interoperability issues. Prior to the full rate production decision, there is the risk that the US may decide not to produce the system. This would present an undesirable situation if the US has committed under an LOA to deliver a system to an FMS customer but decided not to deliver this same system to US forces. The FMS customer would encounter a nonstandard support environment to sustain the system and might lack interoperability with US forces. If the waiver is approved, the LOA for the FMS program must include a special note identifying the risk that the USG may not place this system into production. This waiver policy is often referred to as the Yockey waiver named after a former Under Secretary of Defense for Acquisition.

From an FMS perspective, another point of interest in the acquisition management framework is the milestone B decision. The weapon system program management office is established following the milestone B decision. The program office team will typically consist of a weapon system program manager supported by personnel from several functional disciplines such as:

- Engineering
- Testing
- Contracting
- Logistics
- Financial management

The system program management office is responsible for overseeing the program through the remaining phases of the development and acquisition process. In addition, the program management office will remain in place to manage all the technical aspects of the system after it is delivered to US forces. The program management office will also be responsible for acquiring any additional quantities for DOD and to develop improved or modified configurations.

If the US agrees to sell the system through FMS, the acquisition will be accomplished by the same program management office. The system program management office may acquire the FMS quantities either as individual procurements or by merging the FMS requirements with DOD requirements on the same US contract.

The end of the acquisition life cycle concerns disposal. An integral part of the system development effort is to plan for eventual demilitarization and disposal. For the FMS customer, the DOD decision to curtail or end operations of a given system can impact sustainment support. The components of the system may transition from being standard to nonstandard items. The DOD policy is to support all systems sold through FMS for as long as the FMS customer chooses to operate the system. Many examples exist where DOD currently supports systems operated by FMS customers that the DOD no longer actively retains in its inventory.

SYSTEM ACQUISITION DOCUMENTS ASSOCIATED WITH FOREIGN MILITARY SALES

History shows that most US defense systems will eventually be sold or shared with other friendly nations sometime during the system's life cycle. There are many political, military and economic advantages resulting from the use of the same military equipment by the US and its friends. Whether the situation is just a loan of communications gear to enable a joint operation or a decision to sell advanced military aircraft, the US must evaluate the benefits and risks of sharing military technology and capabilities. As DOD develops new weapon systems, the potential for future international involvement, perhaps to include FMS, is to be considered.

Several documents are generated during the system acquisition process that support evaluating and planning for possible foreign involvement with the system. This section summarizes some of these key documents developed in the system acquisition process that relate to potential FMS system sales.

Cooperative Opportunities Document

Rather than the US independently funding and managing a new major system development, Congress requires the DOD to evaluate potential opportunities to cooperatively develop new systems by partnering with one or more other countries. The document that compares the relative positive and negative impacts of a potential cooperative development is the cooperative opportunities document (COD). The COD answers the four questions listed below. Based on the responses to these questions, the COD draws a conclusion regarding whether cooperative development should or should not be pursued.

- Are there any similar projects in development or production by one or more major allies of the US?
- Could any of these projects satisfy, or be modified in scope, so as to satisfy the US military requirements?
- What are the advantages and disadvantages of trying to structure a cooperative development program? Things such as program timing, cost sharing, technology and standardization should be addressed.
- What are the opportunities for alternative forms of cooperation such as FMS, coproduction, licensed production, component/sub-component codevelopment or incorporation of subsystems from allied sources and what are the advantages and disadvantages?

In the evaluation process to prepare the COD, the benefits and risks, particularly in the areas of technology sharing and standardization, regarding foreign participation are identified. Many of these same issues will resurface in the future when FMS customers submit LORs to purchase the system. The COD, which is developed early in a new system development process, starts to form a US position regarding foreign access to the technologies and capabilities contained within the weapon system. The COD position on foreign access will influence future FMS decisions.

A current example of an international cooperative development is the Joint Strike Fighter (JSF) program. In this program, the US Air Force, Navy, Marines and several other countries are working together to cooperatively develop the JSF. In regard to future JSF sales through FMS, many of the technology transfer and releasability issues are already being identified and resolved during the cooperative development effort.

Program Protection Plan

The weapon systems created via the acquisition process provide the DOD the capabilities necessary to protect US national security. Critical program information (CPI) consists of the critical elements of the system that make it unique and valuable to US defense forces. CPI includes information that if compromised would:

- Degrade combat effectiveness
- Decrease the combat-effective lifetime
- Allow a foreign activity to clone, kill, or neutralize the US system

The objective of the program protection plan (PPP) is to identify CPI and to protect it from hostile collection efforts and unauthorized disclosure during the acquisition process. Per DOD Instruction 5200.39, *Critical Program Information (CPI) Protection Within the Department of Defense*, the official definition of a PPP is:

A risk-based, comprehensive, living plan to protect CPI that is associated with a RDA program. The PPP is used to develop tailored protection guidance for dissemination and implementation throughout the program for which it is created. The layering and integration of the selected protection requirements documented in a PPP provide for the integration and synchronization of CPI protection activities throughout the DOD.

The PPP should consider system vulnerabilities, specific threats, and countermeasures to be employed to protect the item under development. Inputs from the counterintelligence (CI), security, and intelligence communities are required for this analysis as it applies to threats, vulnerabilities, and countermeasures. The program manager, with advice and assistance from supporting CI and security staffs, can design a cost-effective plan using a combination of security countermeasures. In addition to the elements within the system itself, consideration should be given to any engineering processes, fabrication techniques, diagnostic equipment, simulators, or other support equipment associated with the system as possible CPI that should be addressed within the PPP.

The relevance of the PPP to the FMS process is that it begins to identify which elements of the system represent security and technology release concerns. If an FMS customer desires to purchase the system, the PPP created during system development will have already identified the system CPI that needs to be evaluated relative to potential release under an FMS.

Technology Assessment and Control Plan

Acquisition policy encourages program managers to pursue foreign participation in programs. If international participation is anticipated, either through cooperative development or by FMS, the PPP, discussed above, should include a technology assessment/control plan (TA/CP).

DOD Directive 5530.3 requires a TA/CP to assess the feasibility of foreign participation in a program from a foreign disclosure and technical security perspective, to identify security arrangements for international programs and to make decisions on FMS, commercial sales, foreign production or other international use of US technology or processes. The TA/CP consists of four sections:

- Program concept section concisely describes the purpose of the program and the threat or military or technical requirement that created the need for the program.
- Nature and scope of the effort section describes how the technical and/or military operational objectives will be satisfied, how the program will be organized or phased, and how the program will benefit the US.

- Technology assessment is the most important part of the TA/CP. It analyzes the technology involved in the program, its value from both a military and commercial perspective, and the consequences of compromise. The assessment should discuss any known foreign availability of the information or technology involved, and any previous release of the same or similar information or technology to other countries. This assessment should provide a conclusion regarding whether foreign involvement will result in clear benefits to the US that outweigh any damage that might occur. The control plan identifies measures to minimize the potential risks and damage to the US through loss, diversion or compromise. It describes how the security requirements will be satisfied. System security engineering (SSE) can be part of this process. SSE evaluates whether system vulnerabilities can be “engineered out” and whether security can be “built in” during system design. Control measures may include:
 - ◊ Use of modified or FMS-only versions of critical components
 - ◊ Application of anti-tamper technology in system design
 - ◊ Phasing the release of information over the course of the program
 - ◊ Special security procedures to control access to program information

Delegation of Disclosure Authority Letter

The disclosure of classified information must be approved by an appropriate disclosure official. A designated disclosure authority is an official at a subordinate component level that has been designated by the DOD component's principal disclosure authority to control disclosures of classified military information by their respective organization. A Delegation of Disclosure Authority Letter (DDL) is used to delegate disclosure authority to subordinate disclosure authorities. The DDL explains classification levels, categories, scope, and limitations of information under a disclosure jurisdiction that may be disclosed to a foreign recipient. A DDL provides detailed guidance regarding releasability of all elements of a system or technology.

The DDL is generated using the guidelines and restrictions identified by the technology assessment and control plan. The DDL's purpose is to provide disclosure guidance to foreign disclosure personnel so that they may carry out their releasability review functions. Delegated disclosure authorities are responsible for reporting all disclosures of classified information made under their delegation in the Foreign Disclosure System (FDS).

DOD Directive 5230.11, *Disclosure of Classified Military Information to Foreign Governments and International Organizations* provides the format for a DDL. A DDL will address the following areas:

- Highest level of classification of the US information involved in the program
- Approved methods of disclosure, e.g., oral, visual or documentary
- Categories of information may be disclosed or released
- Who is authorized to release material or information, and to whom disclosure is authorized
- Material or information that can be released or disclosed
- Conditions or limitations including material or information that cannot be released disclosed
- Review and release procedures, special security procedures or protective measures be imposed
- Extent of redelegation of authority, if any, permitted to subordinate activities

Program Security Instruction

Many international agreements for cooperative programs contain a requirement for the preparation of a program security instruction (PSI). The PSI is used to reconcile differences in the security requirements of the various participating governments into a single set of standard security procedures for the program. The PSI deals with classified and controlled unclassified information furnished by the participants or generated in the program.

Anti-Tamper Technology

This is a concept rather than a formal acquisition document. In order to protect critical system information and technologies, components of a system may be specifically designed to prevent unauthorized access. This approach facilitates providing advanced capability to foreign users while reducing disclosure risk. Each LOA contains a standard term and condition 1.3 that addresses the use of anti-tamper technology. This LOA note states:

The USG may incorporate anti-tamper (AT) protection into weapon systems and components that contain critical program information (CPI). The AT protection will not impact operations, maintenance, or logistics provided that all terms delineated in the system technical documentation are followed.

INTERNATIONAL ARMAMENTS COOPERATION

The term IAC covers a multi-faceted area in which the US cooperates with other countries and international organizations to research, develop, acquire and sustain military systems. The US may work with friends and allies across the entire system acquisition life cycle. Figure 13-1 illustrates that FMS occurs later in the life cycle after the system has already been fully developed and placed into production. IAC represents opportunities to cooperatively work with other countries in the earlier developmental phases of a system's life cycle. Figure 13-2 illustrates the various types of IAC activities that may occur concurrent with the system acquisition lifecycle.

IAC is generally conducted with nations that have solid political and economic ties with the US, similar military requirements, and a reasonably robust defense science and technology base. Although some countries may be quite important from a political, economic, or military standpoint, if they have different military requirements or lack a substantial defense industrial base, there may be little potential for successful IAC activity.

International Armaments Cooperation Objectives

The core objectives of armaments cooperation are:

- Operational – increase military effectiveness through interoperability and partnership with allies and coalition partners
- Economic – reduce weapons acquisition cost by sharing costs, economies of scale and avoiding duplication of development efforts with our allies and friends
- Technical – access the best defense technology worldwide and help minimize the capabilities gap with allies and coalition partners
- Political – strengthen alliances and relationships with other friendly countries
- Industrial – bolster domestic and allied defense industrial bases

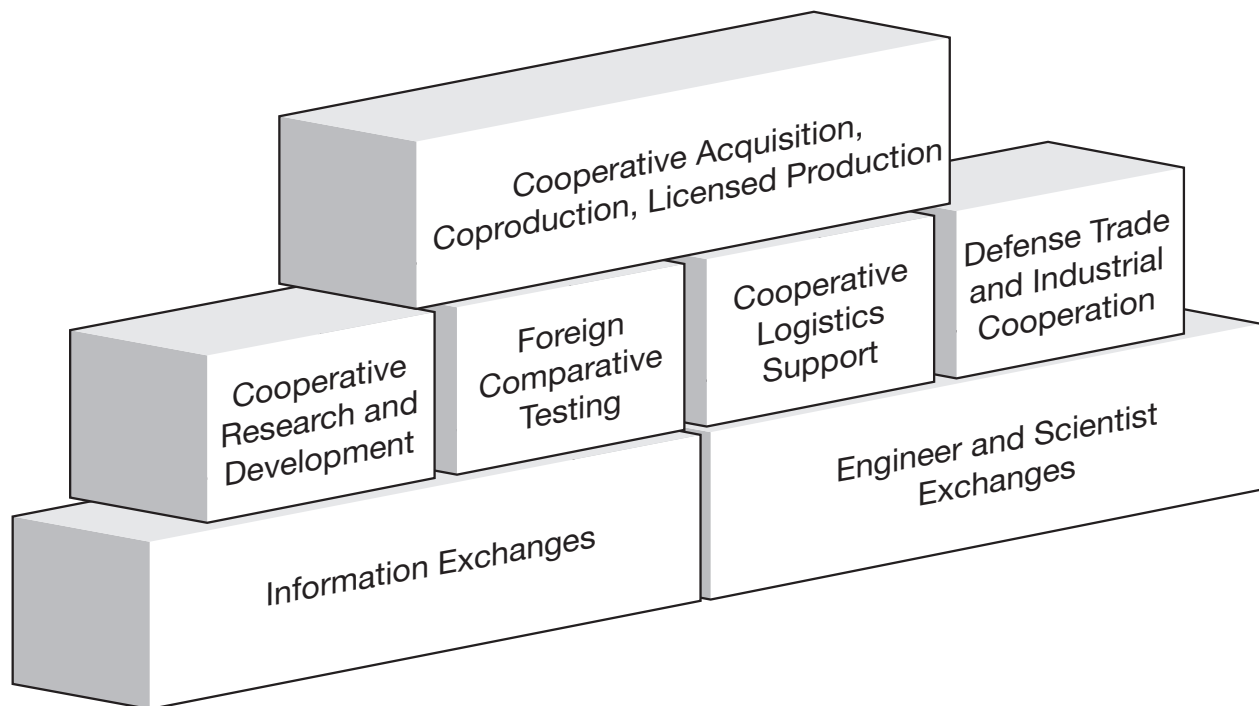
International Armaments Cooperation Programs

The individual programs that comprise the overarching term IAC are listed below. Each of these IAC programs will be presented in more detail later in this chapter.

- Information Exchange Program (IEP)
- Engineer and Scientist Exchange Program (ESEP)
- Foreign Comparative Testing
- Cooperative Research, Development, and Acquisition
- Defense Trade
- Cooperative Logistics

Although these are separate IAC programs, there may be an evolutionary relationship between the programs. For example, one of the more basic cooperative programs may lead to a future more advanced level of cooperation. This building block relationship between IAC programs is illustrated in figure 13-2.

Figure 13-2
Building Blocks of International Armaments Cooperation



International Armaments Cooperation Legislative Authority

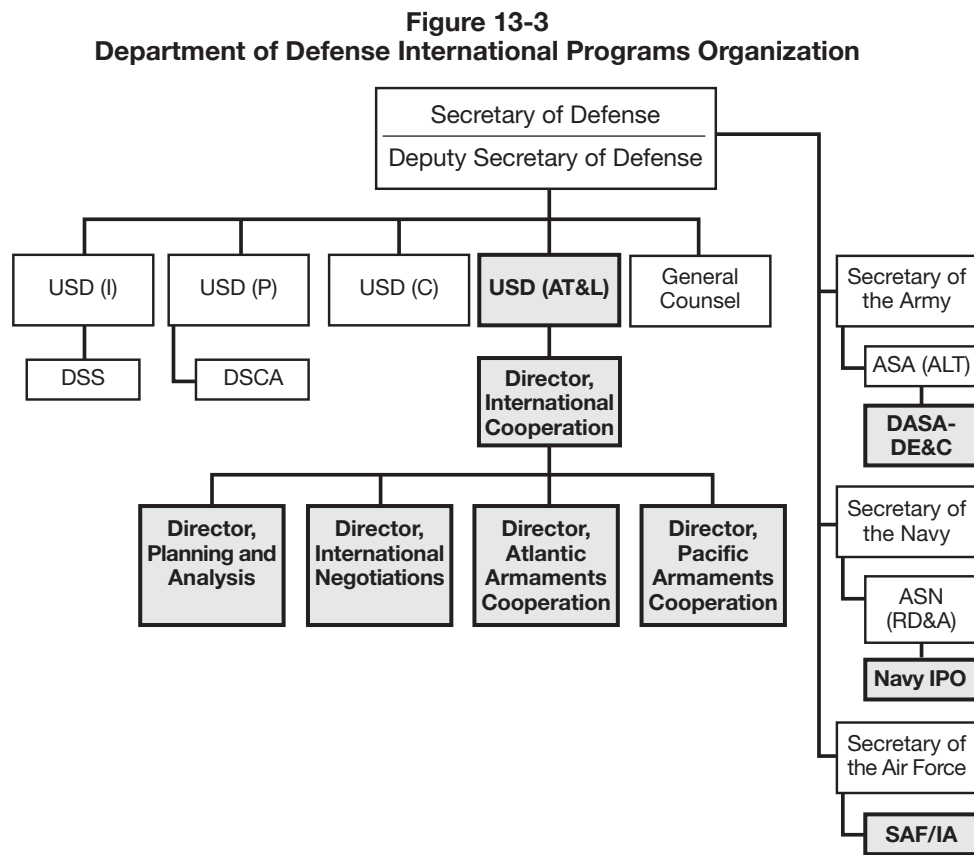
Over the years, Congress has enacted a number of laws encouraging and enabling IAC with US allies in the acquisition of defense equipment. Most are codified in Title 10 *United States Code* (USC) – Armed Forces, and Title 22 *Foreign Relations and Intercourse*. The laws, regulations, and policies that apply to armaments cooperation activities are complex. These IAC laws, regulations and policies in most instances apply in addition to, not instead of, applicable domestic DOD acquisition laws and policies. Given this complexity, assistance in interpreting and applying IAC laws, regulations and policies should be obtained from one of DOD's IAC organizations.

International Armaments Cooperation Oversight

The DOD's oversight for the military components of SA (FMS, FMFP and IMET) is the responsibility of the Under Secretary of Defense for Policy [USD (P)]. IAC, on the other hand, has a different chain of command. The USD (AT&L) is responsible for all IAC activities. In this role, the USD (AT&L) serves as the US National Armaments Director (NAD). The USD (AT&L) established the Office of International Cooperation to focus on overseeing IAC activities. The USD (P) has a supporting role in IAC by reviewing international agreements for foreign policy considerations.

International Armaments Cooperation within Military Departments

Each of the military departments has established an infrastructure to support armaments cooperation programs. Figure 13-3 illustrates these organizations.



The Deputy Assistant Secretary of the Army for Defense Exports and Cooperation is responsible for Army IAC programs. The office with day-to-day responsibility is the Director of Armaments Cooperation. The Army has overseas IAC offices in:

Argentina	Australia	Canada
Chile	France	Germany
Japan	Singapore	United Kingdom

The Assistant Secretary of the Navy (ASN) for Research, Development and Acquisition ASN (RD&A) has delegated responsibility for IAC programs to the Navy International Programs Office (Navy IPO). Within the Navy IPO, the Directorate of Technology Security and Cooperative Programs is responsible for all IAC activities. The Navy has overseas IAC offices in:

Australia	Chile	Japan	Singapore	United Kingdom
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The Deputy Under Secretary of the Air Force for International Affairs (SAF/IA) has assigned oversight of Air Force IAC programs to the Air Force Armaments Cooperation Division (SAF/IAPQ). The Air Force has four overseas IAC offices. The IAC offices are listed below:

- The European Office of Aerospace Research and Development (EOARD) in London
- The Asian Office of Aerospace Research and Development (AOARD) in Tokyo
- The Southern Office of Aerospace Research and Development (SOARD) in Arlington, Virginia, which coordinates research activity in Central America and South America
- The International Affairs Liaison office is in Canberra, Australia

In addition to the military department sponsored overseas offices, US embassies include security cooperation offices (SCOs). The SCO is generally responsible for in-country FMS activities. The SCO may also have IAC responsibilities. In countries with significant IAC activity, DOD places dedicated IAC personnel within the country. Currently, DOD has approximately forty dedicated armaments cooperation personnel assigned worldwide. In countries where there is no SCO, the armaments cooperation point of contact is usually the defense attaché.

Armaments cooperation personnel assigned overseas serve as the in-country liaison for the USD (AT&L). These IAC personnel assist the host government to obtain information on US equipment and programs as well as assisting DOD acquisition organizations to obtain information on host nation equipment, requirements and programs in support of IAC. This function extends to assisting industry, both US and host nation, in gaining access to the other nation's defense markets and in developing cooperative programs. The *Security Assistance Management Manual* (SAMM) identifies the role of the SCO relative to IAC. SAMM table 13-1 summarizes the IAC functions performed by the SCO.

Table 13-1
Security Cooperation Organizations Functions for Armaments Cooperation

Activity	Specific Function
General program support	<ul style="list-style-type: none"> a. Liaison for NAD to host country counterparts in the Ministry of Defense (MOD), services and industry for: <ul style="list-style-type: none"> • Representation • Information exchange • Coordination of contacts • Advice on technical capabilities and military developments b. NAD advisor and liaison for cooperation R&D, production, and support of military systems for: <ul style="list-style-type: none"> • Identification of possibilities and contacts • Transmittal of proposals and liaison with contacts • Exchange of data, information, and questions on DOD and the North Atlantic Treaty Organizations (NATO) cooperative initiatives and programs • Stimulation of host country participation in cooperative initiatives (e.g., emerging technologies, Nunn Amendment concerning cooperative projects) • Participation in negotiations for initiation and continuation of cooperative programs and monitor ongoing programs • Identification of problem areas and potential solutions

Table 13-1 (continued)
Security Cooperation Organizations Functions for Armaments Cooperation

Activity	Specific Function
Support of specific activities	a. Liaison for DOD planning and advisory activities intended to develop defense industrial capabilities in nations with whom the US has formal agreements for: <ul style="list-style-type: none"> • Identification of host country defense industry needs and capabilities • Data exchange • Project monitoring and assessment
Support of specific reciprocal defense procurement Memorandum of Understanding (MOU) and Memorandum of Agreement (MOA)	a. Substantive and administrative participation and support for: <ul style="list-style-type: none"> • Bilateral meetings • Renegotiation and negotiation of annexes • Seminars (government and industry) to explain acquisition processes b. Point of contact for MOD and foreign firms on DOD acquisition and logistics practices and contacts for: <ul style="list-style-type: none"> • Explanation of DOD practices • Identification of DOD contacts • Interface with host country organizations with existing implementing annex c. Point of contact for the OSD and foreign governments to support initiatives that establish new reciprocal procurement MOUs and MOAs
Other activities	a. Oversight of participating arrangements for protection of US and allied technologies and military systems to ensure continued cooperative activities. b. Coordination of host country cooperative activities (e.g., hosting meetings with US theater forces, US mission NATO activities, and representatives of continental US (CONUS) organizations located in host country involved with defense cooperation in armaments (DCA). c. Liaison and advisory support for MILDEP activities in support of cooperative programs. d. Administrative support for visits. e. Provide assistance to the National Disclosure Policy Committee (NDPC) in evaluating host country security programs and negotiating security agreements. f. Point of contact for US defense industry visits.

International Agreements

The area of IAC uses international agreements as the official government-to-government document rather than LOAs. International agreements may also be referred to as Memorandum of Understanding (MOUs) or Memorandum of Agreement (MOAs). Unlike LOAs, international agreements constitute a binding commitment subject to international law. DOD Directive 5530.3, *International Agreements*, governs the international agreements process and specifically states that the FMS LOA is not an international agreement.

Unlike LOAs, international agreements are developed through a process of negotiation. To assist in developing armaments cooperation international agreements, DOD has created the international agreements generator, which permits draft agreements to be quickly developed while ensuring that they conform to relevant US law, regulations, and policies as well as the generally accepted international agreement formats and norms used by foreign nations. The Defense Acquisition University offers a resident course, PMT 304, which covers the international agreement process.

The Case Act requires consultation with the Secretary of State before signing an international agreement, as well as to provide copies of all IAs after they have been concluded. The DOD is also required to consider the effects of any agreement on the US industrial base, and to consult with the Department of Commerce (DOC) about the commercial implications and potential effects on the international competitive position of US industry.

INTERNATIONAL ARMAMENTS COOPERATION PROGRAMS

At present, there are six primary programs that comprise the overall area of IAC. These six programs are:

- Information Exchange Program
- Engineer and Scientist Exchange Program
- Foreign Comparative Testing
- Cooperative Research, Development and Acquisition
- Defense Trade
- Cooperative Logistics

Information Exchange Program

Since the 1950s, DOD components have collaborated with the defense components of allied and friendly nations to exchange scientific and technical (S&T) information in areas of mutual interest. The IEP is conducted under the provisions of DOD Instruction 2015.4, *Defense Research, Development, Test and Evaluation Information Exchange Program*.

The objectives of the IEP are to:

- View different ways of approaching similar technical challenges
- Avoid duplication of research and development (R&D)
- Access technological advances
- Identify areas for further collaboration
- Promote interoperability

Through the IEP, the US and other nations conduct RDT&E information exchanges under the authority of formal information exchange agreements. The term “information” under the IEP includes knowledge obtained in any manner by observation, investigation, or study and the ideas inferred such as that of a scientific, technical, business, financial or programmatic nature. The term “information” includes a variety of source elements as identified in table 13-2.

Table 13-2
IEP Information Sources

Photographs	Reports	Technical Writings
Manuals	Threat data	Sound recordings
Experimental data	Designs	Magnetic media
Specifications	Processes	Pictorial representations
Techniques	Drawings	Other graphical interpretations

Information Exchange Program Master Agreements

S&T information can be exchanged between the US and a foreign nation using a situation-by-situation release process. However, such independent exchanges are cumbersome and may lack adequate legal protection for the information exchanged, particularly in the area of intellectual property rights. These releases of information must each undergo a separate review and approval by the cognizant foreign disclosure and international programs organizations.

The IEP replaces the situation-by-situation review process with an overarching master agreement structure with subsequent annexes. A master IEP agreement is the international agreement between the DOD and the foreign government that establishes a framework for the exchange of RDT&E information. It does not establish information exchange details, instead it authorizes creation of separate annexes for specific information exchange projects. The master IEP agreement establishes the basic terms and conditions for all subsequent IEP annexes.

For example, the master IEP agreement will specify security procedures, the highest classification allowed for the information exchanges, IEP management structure, information use rights including third party transfer, the process for clearance of visitors, and methods for resolving disputes. As a result, DOD components do not include such terms and conditions in individual IEP annexes.

Information Exchange Program Annexes

IEP annexes establish defined information exchange relationships in specific RDT&E subject areas. Annexes are the best information exchange mechanism because they provide adequate legal protection for the information while facilitating the exchange of the information.

The annex will identify the installations, agencies, and laboratories that will provide the information. Field-level scientists and engineers will be authorized to serve as Technical Project Officers (TPO). These TPOs are given the authority to manage information exchanges within the scope of the specific annex.

There is no limit to the number of IEP annexes that may be originated under the authority of a master IEP agreement. Annexes are considered DOD resources and their cross coordination and potential use by other DOD components is encouraged. IEPs may not be used to transfer material, equipment, technical data packages, production information, manufacturing information, price and availability information on US production and/or operational systems, and funding.

Engineer and Scientist Exchange Program

The Engineer and Scientist Exchange Program (ESEP) is a career enhancement program that assigns foreign civilian and military engineers and scientists to DOD government RDT&E facilities and US civilian and military engineers and scientists to foreign defense government and contractor RDT&E facilities. ESEP itself is a component of the broader defense personnel exchange program.

The primary goals of ESEP are:

- Broaden perspectives in research and development techniques and methods
- To form a cadre of internationally experienced professionals to enhance research and development programs
- Gain insight into foreign R&D methods, organizational structures, procedures, production, logistics, testing, and management systems
- Cultivate future international cooperative endeavors
- To avoid duplication of research efforts among allied nations

ESEP participants become an integral part of their host organizations, fully contributing to the project to which they are assigned. They are not sent to the host party or organization for training. Participants are to be already educated and proficient in their respective field of expertise and are expected to be capable of contributing to the host country's RDT&E activities. Because allied and friendly foreign countries use the ESEP experience as a career-enhancing program, foreign participants often rise to positions of influence and importance in their own defense organization. In this way, ESEP fosters long term relationships between US and foreign R&D communities.

ESEP international agreements specify that participants must have at least a bachelor's degree, preferably a master's, in a scientific or engineering discipline. Additionally, a corresponding DOD host organization must be willing to accept the proposed candidate. When a US host center, laboratory, institute, or program office agrees to accept a foreign participant, the facility prepares a position description that describes the project the candidate will work and outlines the candidate's responsibilities and duties. The facility is also responsible for obtaining foreign disclosure guidance regarding the candidate's assignment from the cognizant foreign disclosure organization. Table 13-3 identifies the countries with which DOD currently has ESEP agreements.

Table 13-3
ESEP Participants

Australia	Canada	Chile	Egypt	France	Germany
Israel	Italy	Japan	Norway	Poland	Portugal
Singapore	South Korea	Sweden	Spain	Netherlands	United Kingdom

The foreign parent organization must also agree to pay the participant's salary, housing and travel expenses for the assignment. The US will generally be responsible for direct costs associated with hosting the individual at the US host organization. Historically, the number of foreign participants in ESEP greatly exceeds the number of US participants.

US participants in ESEP are usually selected competitively from volunteers who meet the selection criteria. Military participants are typically Army or Air Force captains or Navy lieutenants. Civilian participants are typically GS-12s or GS-13s, or equivalent level. DOD personnel interested in ESEP exchange opportunities are encouraged to discuss potential assignments with their DOD component international programs organization.

Selected US candidates may be required to attend a DOD language course before going overseas. US participants are expected to take their families to the host nation and live on the local civilian economy, even if there are opportunities to live in US military housing. All ESEP participants are expected to be an integral part of the host organization.

Foreign Comparative Testing

The Foreign Comparative Testing (FCT) program funds US test and evaluation (T&E) of defense items developed by allied and other friendly foreign countries to determine whether those items can satisfy DOD requirements. Congress authorized the FCT Program in 1989 by consolidating two earlier programs:

- The Foreign Weapons Evaluation Program
- North Atlantic Treaty Organization (NATO) Comparative Test Program

The law states:

It is the sense of Congress that the Secretary of Defense should test conventional defense equipment, munitions, and technologies manufactured and developed by countries to determine the ability of such equipment, munitions, and technologies to satisfy US military requirements or to correct operational deficiencies; and that while the testing of non-developmental items and items in the late state of the development process are preferred, the testing of equipment, munitions, and technologies may be conducted to determine procurement alternatives.

The FCT program supports the US national policy by ensuring that the US military has the best equipment available in the world. The FCT program avoids redundant development, ensures standardization of equipment, and reduces acquisition lead times and costs. In the private sector, it also serves as a catalyst for industry teaming arrangements. Annual authorization and appropriations acts establish the level of DOD-wide FCT funding available in a given year. Each year, the military services and the Special Operations Command propose projects to Office of the Secretary of Defense (OSD) for FCT funding consideration. The proposal is a comprehensive explanation of an FCT project that clearly describes the candidate item for which funding is requested, cost and schedule data for the T&E, and additional information needed by OSD to evaluate the merit of the project. The OSD evaluates proposals to ensure submitting components have:

- Strong user advocacy for the proposed item
- Addressed valid requirements
- Completed thorough market investigations
- Developed viable, funded acquisition strategies

The highest priority for FCT funding is for equipment in production or in the late stages of development which demonstrates good potential to satisfy US requirements with little or no modification and which the sponsor intends to procure after successful tests. The FCT program is not allowed to fund T&E of US equipment nor purchase US equipment for testing. Current FCT policy guidance, specific procedures and points of contact may be obtained from the Comparative Technology Office website: <http://www.acq.osd.mil/cto/>.

Cooperative Research, Development and Acquisition Programs

Cooperative research, development, and acquisition (RD&A) refers to a range of international programs in which DOD and a foreign nation jointly manage efforts to satisfy a common requirement by sharing work, technology, and costs under the provisions of an international agreement. These programs range in scope from small bilateral S&T agreements to multi-billion dollar, multi-national programs such as the JSF program. There are a number of types of agreements the US and its partners use, and a variety of statutes that provide the legal basis for cooperating in defense acquisition. Table 13-4 summarizes cooperative RD&A characteristics.

Table 13-4
Cooperative Program Characteristics

Are	Are Not
Shared cost	Contracts
Shared Risk	FMS buyer-seller relationships
Shared benefits	One-way transfers or grants
Jointly managed	Foreign aid
Government-to-government	Industry only relationships

DOD strongly encourages IAC as a key aspect of the DOD acquisition process. DODD 5000.01, which provides management principles and mandatory policies and procedures for managing all acquisition programs, states:

Program managers shall pursue international armaments cooperation to the maximum extent feasible, consistent with sound business practice and with the overall political, economic, technological, and national security goals of the US.

When the DOD has a requirement for a new or improved capability, DODD 5000.01 prescribes an order of preference to be considered in acquisition. Table 13-5 lists this hierarchy. It is important to note that potential foreign sources are to be considered within the first three alternatives. While FMS offers a method for foreign customers to purchase US systems, by policy, DOD examines the potential for purchasing foreign commercial and military items or to work cooperatively with other countries to develop new systems.

Table 13-5
Acquisition Order of Preference Department of Defense 5000.01

- | |
|---|
| <ol style="list-style-type: none">1. Procurement or modification of commercial products, services, and technologies or dual-use technologies from domestic or international sources.2. Production or modification of previously-developed US or allied systems.3. Cooperative new development program with one or more allied nations4. New DOD joint service development program.5. New DOD single service-unique development program. |
|---|

Cooperative Production versus Coproduction

Foreign governments often seek to domestically produce part or all of a US defense system in order to satisfy their own domestic defense industry development goals. There are three distinct methods of authorizing foreign production of defense articles.

First, cooperative production is conducted with partner nations under a cooperative international agreement and features an allocation of production responsibilities amongst the partner nations. Individual partner nations will be designated as the manufacturer of certain system components. The designated manufacturer will produce the respective components for the entire production quantity of the system. As such, the designated manufacturer will not only produce components for its own nation but also components for all partner nations. Final assembly can be conducted by one or more of the partners. Most cooperative production programs naturally evolve from cooperative development phase partnerships. The JSF program will utilize cooperative production.

Second, FMS coproduction involves the use of FMS procedures and commercial licenses to provide a foreign nation the ability to produce US-origin defense articles. Coproduction capabilities may be transferred solely through FMS LOAs, may involve a combination of FMS LOAs and associated munitions export licenses, or may require development of a coproduction international agreement. FMS coproduction agreements are governed by the SAMM, chapter 11.

Third, licensed coproduction involves use of commercial munitions export licenses issued by the Department of State (DOS). Licenses that authorize the export of manufacturing technical data are referred to as Manufacturing Licensing Agreements (MLAs). Licensed production enables US companies to transfer to foreign governments or foreign companies the ability to produce US origin defense articles. It should be noted that the US defense articles proposed for licensed coproduction may not even be in DOD use, or may be a significantly modified version of DOD equipment. The Defense Technology Security Administration (DTSA), in concert with the other DOD components, agencies, and the OSD staff, plays a leading role in formulating DOD's position with regard to US industry-licensed coproduction proposals.

Defense Trade

Although most DOD equipment is acquired from domestic sources, DOD makes use of a worldwide supplier base. DOD is somewhat constrained by laws and regulations that discriminate against acquisition of non-US products such as the Buy American Act and annual DOD appropriations act provisions that may restrict certain procurements to US sources.

To overcome some of these limitations, the DOD has negotiated reciprocal procurement agreements with many allies to facilitate defense trade. These agreements establish reciprocity in the treatment of each other's vendors and enable the Secretary of Defense to waive the discriminatory provisions of the Buy American Act.

The Buy American Act discriminates against foreign suppliers by requiring a price differential to be applied to foreign goods in the evaluation process of competitive source selections. The Secretary of Defense is authorized to waive the provisions of the Buy American Act on the basis of reciprocity if the partner country reciprocally waives its similar buy national legislation for procurements from US sources. The DOD has entered into defense reciprocal procurement agreements with many allied and friendly foreign nations. A list of the countries that the DOD has established reciprocal procurement arrangements is contained in the *Defense Federal Acquisition Regulation Supplement (DFARS) 225.872-1*.

Foreign-developed products acquired by the DOD are often produced in the US under license. Examples of such products are the Rhinemetall 120mm tank gun used on the M1A1 Main Battle Tank, the Beretta 9mm pistol, and the AV-8B Harrier aircraft.

Cooperative Logistics

Cooperative logistics refers to cooperation between the US and allied or friendly nations or international organizations in the logistical support of defense systems and equipment. Cooperative logistics is part of the acquisition life cycle process. However, because logistics is also a substantial part of military operations, much of the implementation for cooperative logistics involves the US geographic combatant commands (GCCs).

Acquisition-Only Cooperative Logistics

10 USC 2341 authorizes DOD to acquire logistic support, supplies, and services directly from NATO countries' governments, subsidiary NATO bodies, the United Nations (UN) organization or any other regional international organization of which the US is a member, and other eligible countries for US forces deployed in the supporting country's military region. It allows payment by either cash payment or replacement-in-kind of identical or substantially identical items. A non-NATO country must meet one or more of the following criteria:

- Have a defense alliance with the US
- Permit stationing of members of the US armed forces or the home porting of naval vessels of the US
- Agreed to preposition US materiel
- Serve as host country for US armed forces during exercise
- Permit other US military operations in-country

Cross-Servicing Cooperative Logistics

10 USC 2342 authorizes DOD to receive and to provide logistics support, supplies, and services to a NATO nation, a NATO subsidiary body, the UN organization or any other regional international organization of which the US is a member on a reciprocal basis. This authority cannot be used to procure any goods or services reasonably available from domestic commercial sources. The Secretary of Defense may designate non-NATO nations as eligible to participate in cross-servicing agreements after:

- Determining such action is in the interest of US national security
- Consultation with the DOS
- Expiration of a thirty-day waiting period after notifying Congress

Acquisition and Cross-Servicing Agreements

Acquisition and Cross-Servicing Agreements (ACSAs) are used to transfer logistics support during wartime, combined exercises, training, deployments, contingency operations, humanitarian or foreign disaster relief operations, certain peace operations under the UN Charter or for unforeseen circumstances. ACSA authority is almost always exercised by the geographic combatant command (GCC). The US has ACSAs with many countries, including most NATO nations. DODD 2010.9, *Acquisition and Cross-Servicing Agreements*, provides complete details on responsibilities and procedures for acquiring and transferring logistics support, supplies, and services.

ACSAs may not be used to increase inventories, nor can DOD use them when the desired materiel or service is reasonably available from US commercial sources. ACSAs are not used as a routine source of supply for a foreign country. Routine foreign requests for desired US defense articles and services should be addressed through FMS procedures in accordance with the SAMM.

Traditionally, ACSAs could not be used to provide items designated as significant military equipment (SME) on the *US Munitions List* (USML). However, Congress approved legislation (sections 1202 and 1203) to permit SME (and training) to be provided on a temporary basis (one year) under an ACSA to countries that are coalition partners with the US in Iraq and Afghanistan operations and for Peace Keeping Operations (PKOs). Reimbursement for ACSA transactions will be by cash (within sixty days), Replacement In Kind (RIK) within one year, or Equal Value Exchange (EVE) within one year. RIK and EVE reimbursements not accomplished within the required timeframe shall be converted to a reimbursable cash transaction, and the resulting accounts receivable or accounts payable shall be liquidated within thirty days.

ACSA Legal Authorities. Acquisition only authority allows DOD components to exercise a statutory waiver of certain provisions of US law in the acquisition of Logistic Support, Supplies, and Services (LSSS) from eligible countries and international organizations. This authority may only be used to acquire LSSS to support US forces deployed outside the United States. Acquisition only authority may be implemented either through contracts using the authority of 10 USC chapter 137 (Federal Acquisition Regulation (FAR) contracting) in conjunction with 10 USC 2341 and 2343, or through international agreements (acquisition-only agreements) that rely solely on the authority of 10 USC 2341 and 2343.

Cross-Servicing authority authorizes the Secretary of Defense to enter into cross-servicing agreements with authorized countries and international organizations for the reciprocal provision (mutual exchange) of LSSS with the military forces of that country or international organization. When exercising cross-servicing agreement authority, DOD components may provide LSSS to a foreign country or international organization only as a transfer or temporary loan under a cross-servicing agreement, except when provided as payment for LSSS acquired by the DOD pursuant to an acquisition-only agreement.

Refer to CJCSI 2120.01B for detailed information on acquisition and cross-servicing agreement (ACSA) authorities.

ACSA Global Automated Tracking and Reporting System (AGATRS). AGATRS is the DOD system of record to manage ACSA transactions. The system offers US-only visibility (partner nations do not have access), ACSA and international agreements reference library, worldwide visibility of transactions, and potential sources of supply. There is currently no Defense Finance and Accounting Service (DFAS) interface with AGATRS. AGATRS is a four-part process:

1. Creating a Logistics Order
2. Receiving a Logistics Order
3. Creating an Invoice
4. Applying Payment

Host Nation Support

Host nation support (HNS) is civil and military assistance rendered in peace or war by a host nation to allied or friendly forces and organizations located on or in transit through its territory. HNS agreements are normally pursued by GCCs under overall direction of the Joint Chiefs of Staff and the Director for International Cooperation. HNS assistance is provided in accordance with commitments made under alliances or bilateral or multilateral agreements, usually in the context of a broader cooperative logistics program. Areas normally addressed in HNS agreements are illustrated in table 13-6.

Table 13-6
Types of Host Nation Support

Logistics lines of communication	Terminal transfer services
Collocated operating bases	Supplies
En route and transient support	Troop support services
Overflight rights	Facilities
Weapons systems cross-servicing	Materiel handling
Port services	Naval vessels' support
Equipment decontamination services	Intra-theater transportation
Medical services and equipment	Communication services and equipment

Other Logistics Support

Cooperative Military Airlift Agreements. 10 USC 2350c authorizes the Secretary of Defense to enter into cooperative military airlift agreements with allied countries. These agreements cover transporting NATO and other allied nations' military personnel and cargo on aircraft operated by or for the US armed forces, in return for reciprocal transportation of US military personnel and cargo. The Secretary of Defense may also enter into non-reciprocal agreements with NATO subsidiary bodies for transportation of their personnel and cargoes on US armed forces aircraft.

War Reserve Stock for Allies. The Foreign Assistance Act of 1961 (FAA) established the war reserve stocks for allies (WRSA) program. WRSA allows the prepositioning of host-nation intended, but US-owned, war reserve material in authorized countries during peacetime. US policy requires allies to provide for their own sustainability to the maximum extent possible. Any action to supplement established allied war reserve requirements will be considered only on a case-by-case basis. The host

nation through a bilateral agreement will normally fund storage, maintenance, in-country transit, and other WRSA-related costs.

Congress limits the value of assets transferred into WRSA stockpiles located in foreign countries in any fiscal year through authorizing legislation. The US retains title to the WRSA stocks; title must be subsequently transferred before the foreign country may use them.

Acceptance and Use of Real Property. 10 USC 2350g authorizes DOD components to accept real property, services, and supplies from a foreign country for support of any element of the US armed forces in an area of that country. This includes real property or the use of real property and related services and supplies for use by the US in accordance with a mutual defense agreement or an occupational arrangement; and services furnished as reciprocal international courtesies customarily made available without charge.

SUMMARY

The DOD has established a standard management framework to develop, produce, acquire and sustain weapon systems. The policy for systems acquisition is contained in DOD's 5000 series documents. All MILDEPs are required to use the 5000 series acquisition management framework in developing and acquiring new weapon systems for DOD. Some key information that supports USG decisions regarding which weapon systems and technologies are releasable to FMS customers is derived from documents (COD, PPP, TA/CP, DDL, PSI) developed during the system acquisition process. Also, if an FMS customer requests and DOD approves accomplishing the development of a unique system or a major modification to an existing system under FMS, DOD's 5000 series systems acquisition process will be applied to that FMS development and acquisition project.

This chapter also provided an introduction to another form of security cooperation referred to as IAC. Like SA, IAC seeks to enhance US national security but does so through different methods. The area of IAC uses international agreements as the official government-to-government document rather than an LOA. International agreements may also be referred to as MOU or MOA. Unlike LOAs, international agreements constitute a binding commitment subject to international law.

While FMS offers a method for foreign customers to purchase US systems, IAC examines the potential to work cooperatively with other countries through the six primary IAC programs:

- Information Exchange Program
- Engineer and Scientist Exchange Program
- Foreign Comparative Testing
- Cooperative Research, Development and Acquisition
- Defense Trade
- Cooperative Logistics

IAC is generally conducted with nations that have solid political and economic ties with the US, similar military requirements, and a reasonably robust defense science and technology base. DOD encourages IAC as a key aspect of the DOD systems acquisition process. The USD (AT&L) is responsible for all IAC activities. While USD (AT&L) provides oversight, each of the military departments has established an infrastructure to execute their respective armaments cooperation activities.

REFERENCES

- CJCSI 2120.01A, *Acquisition and Cross-Servicing Agreements*.
- CJCSI 3170.01G *Joint Capabilities Integration and Development System*.
- Defense Acquisition Guidebook*. DODD 5000.01, *The Defense Acquisition System*.
- DOD 5105.38-M, *Security Assistance Management Manual*.
- DODD 2010.9, *Acquisition and Cross-Servicing Agreements*.
- DODD 5530.3, *International Agreements*.
- DODI 2010.06, *Materiel Interoperability with Allies and Coalition Partners*.
- DODI 2015.4, *Defense Research, Development, Test and Evaluation Information Exchange Program*.
- DODI 5000.02, *Operation of the Defense Acquisition System*.
- International Armaments Cooperation Handbook*, 6th ed. April 2010.